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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/750,214      | 01/02/2004  | Andrew E. Flanders   | 1538.110NP          | 6649             |

23294 7590 04/18/2007  
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ARLINGTON, VA 22202

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| EXAMINER |
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MAI, ANH T

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2832

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/18/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/750,214             | FLANDERS ET AL.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Anh T. Mai             | 2832                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,7,21 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 4,5,22-24 and 31-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-3, 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kukurudza [5373563].

Kukurudza discloses:

- at least one primary coil 20 formed of continuous conductor having first and second terminal ends [two nodes at the coil ends as shown in figure 4];
- each primary coil having a helical winding section wound around an interior space 36;
- at least one secondary closed loop formed of a continuous conductor 22 and being electrically insulated from said primary coil; said secondary closed loop having a section wound around said interior space [figure 4].

With respect to limitation “said at least one primary coil capable of producing magnetic field lines, wherein the interior space is intersected by said primary coil magnetic field lines” and “capable of producing eddy currents in response to said primary coil magnetic field lines” are considered inherent operational characteristics derived from the structure above.

With respect to claim 2, the secondary closed loop comprises a single closed loop of conductive wire as shown in figure 4.

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With respect to claim 3, the secondary closed loop comprises a single closed loop of conductive wire disposed within the interior of said at least one primary coil [as shown in figure 4].

With respect to claims 25-30, core 36 of Kukurudza is made of magnetically permeable core [iron-steel], which fits into interior space [col 4, lns 21-27].

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-7, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kukurudza in view of Williamson [4901048].

Kukurudza discloses the invention as claimed as cited above except for a core carrying a frame member extending out of the interior space and defining a flux path for said primary coil magnetic field lines. Williamson discloses a core carrying a frame member extending out the interior space and defining flux path for the magnetic field lines [E-core with center post as shown in figure 13]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use E-core as taught by Williamson to the device as disclosed by Kukurudza. The motivation would have been to provide flux path as a nature of a magnetic core of transformer. Therefore, it would have been obvious to combine Williamson with Kukurudza.

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With respect to claim 21, core 36 of Kukurudza is made of magnetically permeable core [iron-steel], which fits into interior space [col 4, lns 21-27].

***Allowable Subject Matter***

5. Claims 4-5, 22-24, 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 recites, inter alia, *a single closed cylindrical loop made from a conductive sheet disposed within the interior of said at least one primary coil.*

Claim 5 recites, inter alia, *a single closed cylindrical loop made from a conductive sheet disposed around the exterior of said at least one primary coil.*

Claim 5 recites, inter alia, second flux conductive flame also having a substantially hemispherical or bowl-shaped outer wall encircling an annular interior space that surrounds a second central core projecting into the second frame's interior, said second central core being aligned along a central axis and terminating in a second distal core end.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892 form.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

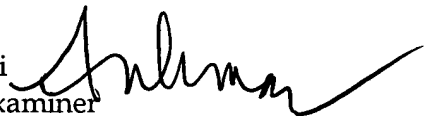
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anh T. Mai  
Primary Examiner  
Art Unit 2832



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